Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-23 (Canceled).

24. (Currently Amended) A recombinant attenuated Salmonella cell which comprises at least one heterologous nucleic acid molecule encoding a Helicobacter immunogen under the control of an expression signal, wherein said Helicobacter immunogen consists of urease A and urease B or ~~immunologically reactive~~ immunogenic fragments of urease A and urease B and wherein said attenuated cell is capable of expressing said nucleic acid molecule ~~or capable of causing the expression of said nucleic acid molecule in a separate target cell~~, and wherein said recombinant attenuated Salmonella cell is capable of inducing protective immunity.

25. (Previously Presented) The cell according to claim 24, wherein said cell is a Salmonella aro mutant cell.

26. (Canceled)

27. (Currently Amended) The cell according to claim 26, further comprising a nucleic acid reorganization mechanism, wherein said ~~nucleic acid molecule encoding the Helicobacter immunogen is under the control of an~~ expression signal ~~which~~ is substantially

inactive in the Salmonella cell and ~~which~~ is activated by a nucleic acid reorganization caused by ~~a~~ said nucleic acid reorganization mechanism in the Salmonella cell.

28. (Currently Amended) The cell of claim 27, wherein the expression signal is a bacteriophage promotor, and said cell further comprises a nucleic acid encoding a bacteriophage RNA polymerase ~~and the activation is caused by~~ wherein said nucleic acid reorganization is a DNA reorganization resulting in the production of a corresponding bacteriophage RNA polymerase in the Salmonella cell.

29. (Canceled)

30. (Previously Presented) A method for the preparation of a living vaccine comprising providing the salmonella cell of claim 24 and formulating the cell in a pharmaceutically effective amount for inducing protective immunity against Helicobacter with pharmaceutically acceptable diluents, carriers or adjuvants.

31. (Currently Amended) A method for preparing a recombinant attenuated Salmonella cell according to claim 24, comprising the steps:

a) inserting a nucleic acid molecule encoding a Helicobacter immunogen into an attenuated Salmonella cell, wherein said Helicobacter immunogen consists of urease A and urease B or ~~immunologically reactive~~ immunogenic fragments of urease A and urease B, and wherein a recombinant attenuated Salmonella cell is obtained which expresses said

nucleic acid molecule ~~or causes expression of said nucleic acid molecule in a separate target cell~~, and

b) cultivating said recombinant attenuated Salmonella cell under suitable conditions.

32. (Previously Presented)The method according to claim 31, wherein said nucleic acid molecule encoding a Helicobacter immunogen is located on an extrachromosomal plasmid or inserted in the chromosome.

33. (Currently Amended) A pharmaceutical composition which is a living vaccine, comprising as an active agent ~~a~~ the recombinant attenuated cell according to claim 24, together with a pharmaceutically acceptable diluent, carrier or adjuvant.

34. (Previously Presented) The composition according to claim 33, wherein said composition is in a form suitable for administration to a mucosal surface.

35. (Previously Presented) The composition according to claim 33, wherein said composition is in a form suitable for administration via a parenteral route.

36. (Previously Presented) A method for treating an infection by Helicobacter pylori, comprising administering at least once, to a patient a composition comprising the cell according to claim 24 in a pharmaceutically effective amount for inducing protective immunity.

37. (Previously Presented) A method of preventing an infection by Helicobacter pylori, comprising administering to a patient a composition comprising the cell according to claim 24 in a pharmaceutically effective amount for inducing protective immunity against Helicobacter pylori.

38. (Previously Presented) The method according to claim 36, wherein the composition is administered as a single dose.

39. (Previously Presented) A method of inducing protective immunity against a Helicobacter infection in a mammalian host comprising administering to a mammalian host in need of protective immunity an effective amount of the cell according to claim 24.